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ABSTRACT

Just as minority spoken languages borrow from surrounding majority languages, so British Sign Language (BSL) borrows signs from English. BSL may borrow from both spoken and written English, but here we focus on the processes involved in borrowing from the written English word, using the manual alphabet. The end result of borrowing depends on an interaction of at least four variables: the form of the English word, the word-formation processes of BSL, the sociolinguistic attitudes of the signer, and the skills of the signer in BSL, English and fingerspelling. We can look at the features of language contact by studying the way British place names are represented in BSL. This paper reports the possible outcomes of using a British place-name within BSL discourse and demonstrates how the length of the English word, the number of syllables, the particular letters in the word and the morphology of the word all interact with BSL processes to dictate the signed outcome of the loan. (Contains nine references.) (Author)

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WHERE CAN YOU SEE LANGUAGE CONTACT BETWEEN ENGLISH AND BRITISH SIGN LANGUAGE?

The use of the manual alphabet in place-names in BSL.

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Abstract

Just as minority spoken languages borrow from surrounding majority languages, so BSL borrows signs from English.

BSL may borrow from both spoken and written English, but here we focus on the processes involved in borrowing from the written English word, using the manual alphabet. The end result of borrowing depends on an interaction of at least four variables:

a) the form of the English word
b) the word-formation processes of BSL
c) the sociolinguistic attitudes of the signer
d) the skills of the signer in BSL, English and fingerspelling.

We can look at the features of language contact by studying the way British place names are represented in BSL. This paper reports the possible outcomes of using a British place-name within BSL discourse and demonstrates how the length of the English word, the number of syllables, the particular letters in the word and the morphology of the word all interact with BSL processes to dictate the signed outcome of the loan.

Language contact between minority and majority languages tends to result in borrowing from the majority language by the minority language (eg Higa 1979 and Weinreich 1966). This occurs in most cases of language contact, and is also the case in British Sign Language when BSL borrows signs from English (see eg Brennan 1992, and also Lucas & Valli, 1992 for American Sign Language).

BSL is the visual-gestural language used by members of the British deaf community. It is estimated that there are approximately 50, 000 users of BSL. BSL users are almost all bilingual in English and BSL, and live surrounded by English. As there is no widespread written form of BSL, British deaf signers must use English for daily written communication. Consequently, British deaf signers are skilled and regular users of English orthography, and this influences the outcome of language contact.

Most languages borrow in speech or writing, making whatever changes are necessary to fit the phonological or graphological system of the language (Cannon, 1987). BSL, too, borrows from English, taking information from both spoken and written forms. It also borrows the meaning through loan translations from English into BSL signs, just as other languages do.

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This paper will consider the loans from spoken and written forms.

Borrowing from spoken English does have a role in BSL. The use of the *voice* is not a part of the system of borrowing from English into BSL, because BSL is strictly a visual language. However, although the sound of English words is not borrowed by BSL, the mouth patterns produced in spoken English may be borrowed. Signers may use the mouth patterns of a spoken English word as part of a BSL sign. These mouth patterns may be full, clear, and recognisably English, or they may be greatly reduced, and not necessarily identified as spoken English by non-signers. However, whether the mouth patterns are full or reduced, there is no doubt that some have been borrowed into BSL. For example, the BSL signs HUSBAND and WIFE are manual homonyms, but are disambiguated by the English mouth-patterns from the words "husband" and "wife".[1] The use of spoken language mouth patterns in BSL is outside the scope of this paper, but is a major outcome of the contact between the two languages and needs further research.

Borrowing from written English is common in BSL. This is done via the manual alphabet. Each letter of the manual alphabet corresponds to a letter of the English alphabet. This enables signers to recreate the orthography of any written English word through fingerspelling. This is not the same as borrowing the written form of the word. For example, there are no capital letters, no gaps between words, and no punctuation in fingerspelling. The British manual alphabet is reproduced here in Figure 1.

(Figure 1 should be inserted here)

Borrowing from written English through the use of the manual alphabet may be of two major types in BSL.
1) The sign might be based on the first letter only from the written English word (eg -d-d-[2] glossed as DAUGHTER and -g-g- glossed as GOVERNMENT), or
2) the sign might use strings of letters from the manual alphabet which may encode the orthography of the whole word, or only some of the letters as fingerspelling. In other words, the fingerspelling may be full or reduced.

This paper identifies four major factors which will affect the outcome of the borrowing. The interaction of these four factors will result in the form of the BSL sign for the place-names. The four factors are as follows:
a) the form of the English word
b) the word-formation processes of BSL, and the phonology of BSL
c) the sociolinguistic attitude of the signer
d) the skills of the signer in BSL, English and fingerspelling. (These three skills may vary greatly among signers)

This paper will focus primarily upon the first of these factors; the form of the English word.

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[1] Conventionally, sign glosses are written in upper case

[2] Conventionally, letters from the manual alphabet are written in lower case, and bound by hyphens.

The outcome of borrowing by fingerspelling through language contact is demonstrated by a study of the way British place-names are signed in BSL. Place-names are a useful area to consider for this for two main reasons. Firstly, place-names have to be referred to in the course of BSL discourse, and cannot be avoided. They are a common part of every deaf person's life. Secondly, they are an area in which the use of the manual alphabet is known to be very productive. There are many established place-name signs which use the letters of the manual alphabet eg -m-c- (MANCHESTER), -g-g- (GLOUCESTER), and -b-l- (BRISTOL)

Data Corpus

The data for this study comes from twenty signers living in Bristol (ten deaf and ten hearing) and from 172 British place-names. The place-names were not those of major cities for which there is a known non-derived sign for all Bristol signers (such as LONDON or LIVERPOOL). Rather, they were of places that the signer might not be expected to know or regularly use. The aim was to create a situation in which the signer had to apply sign formation rules from other place-names to create a new sign in this circumstance.

Each signer was given a list of British place-names and asked how they would sign them, given the understanding that their addressee already knew the identity of the place. This was because in BSL a signer would normally be expected to fingerspell any place-name fully the first time the location was referred to. This full fingerspelling may be seen as a nonce loan, or even as code-switching into English. The signer is identifying a word in another language. However, once the identity of the place is understood by all parties, the full fingerspelling is not required, and it is possible to use a BSL sign to represent the name of that place.

Sources for place-name signs in BSL

There are three possible sources for place-name signs in BSL (and for many other signs).

1) Signs created through some metonymic, iconic representation, and completely unrelated to English
eg DERBY (derived from the Derby ram), LONDON (derived from the noise of a big city), DURHAM (derived from the lion on the City's arms) and SHEFFIELD (derived from Sheffield knives)

2) Loan translations based on a morphological analysis of the English word eg NEW CASTLE, or close translations eg CHESTER ("chest"), BRISTOL ("pistol"), and WORTHING ("worth")

3) The manual alphabet is used to reflect some form of the written English word, by:
   a) recreating the whole word
   b) using only the first letter
   c) selecting certain letters from the word
   d) using letter(s) from the manual alphabet and signs, in a morphological analysis.

This research will focus on the the third of these: the use of the manual alphabet.

From this research, it is not possible to predict the outcome of the contact. Given a British place-name, I cannot say what the form of the BSL sign name for that place will be. This is because of the complex interaction of so many factors involved. However, what we can do as a result of this research is start to explain why we see the forms that we do.

Results

Importantly, the research reported here demonstrated that different uses of the manual alphabet are not random, and signers use particular strategies. Eighty-two percent of all the responses to the English place-names given fell into one of six proposed categories, as may be seen in Table 1 below.

Category of response	Percentage of responses
Full production of the English word eg -d-i-s-s- ("Diss")	14%
First letter only of the English word eg -r-r- ("Risby")	26%
First and last letters only of the English word eg -p-x- ("Pensax")	11%
First letters of two syllables of the English word eh -b-h- ("Birkenhead")	11%
First two letters of the English word eg -a-b- ("Abergavenny")	7%
Use of a non-derived sign with letters from the English word eg -i-WORTH ("Ixworth")	13%
Other strategy eg -c-t-t- ("Cott"), -t-h-k- ("Throsk"), -a-u-c-h-m- ("Auchtermuchty")	18%

Table 1: Percentage of responses using different strategies in the loan process

The information in the table shows that the outcome of contact is not random, but produced as a result of BSL rules for word-formation operating on English loans.

Importance of Form Of The English Word

Looking at the form of the English word, it is possible to identify at least four major variables which will influence the form of the BSL loan sign.

a) Length of the English word
b) Number of syllables of the English word
c) The letters in the word
d) The morphology of the English word.

These will be considered in turn.

a) Length of the English word

If the English word is more than 4 letters long, the fingerspelled loan sign will very rarely be the full recreation of the whole word.

Of th
signe place-names of different letter lengths, the proportion of fully fingerspelled loan
for words of increasing length can be seen in Table 2.

Leng	
3 let	h of the English word	Percentage of responses fully fingerspelled
4 let	ers	49%
5-6 l	ers	30%
bisyl	tters	6%
trisy	ables, over 4 letters	4%
	ables and more	0%

Table
2: Percentage of fully fingerspelled responses to English words of increasing length.

The
of th nformation in the table shows that the length of the English word dictates the form
finge BSL sign. If the word is three or four letters long, it is likely to result in the full
use rspelling of the word; if it is longer than that, it will result in a selection of letters or
f the first letter only.

It is
lang enerally accepted that the ideal number of different hand-configurations in sign
and ages is two, and there have been suggestions (particularly from Battison, 1978,
Engl nore recently by Brentari 1994) that all signs derived from fingerspellings of
seem sh words have an optimum maximum of two letter handshapes. This does not
maxi to be the case in BSL fingerspellings. While it does seem true that BSL allows a
seem num of two hand-configurations in non-derived signs, anything up to four letters
-s-s- s acceptable, especially if one letter is a vowel or if there is a geminate cluster (eg
in -d-i-s-s-).

How
were ver, the skill of fingerspellers is also an important factor here. The deaf signers
the v far more likely than the hearing signers to fingerspell full English words, even if
way ords were more than four letters long, claiming that they felt most comfortable that
whe Overall, the hearing signers only fingerspelled 10% of all the place-names fully,
signe as the deaf signers fingerspelled 17% of the place-names fully. The hearing
adop rs admitted they felt uncomfortable with fingerspelling and were more likely to
(198 t other permitted abbreviation strategies, rather than fingerspell fully. Wilcox
sign 3) in a study of hearing signers of American Sign Language showed that hearing
rs find fingerspelling harder than signing, both in the reception and the production.

The
signa verage number of fingerspelled letters in any abbreviation was higher for the deaf
abbr rs than it was for the hearing signers. For the hearing signers, the mean
signe viation length was 3.2 letters, and for the deaf signers it was 3.9 letters. Deaf
finge rs (more skilled at fingerspelling) were more likely to produce longer
rspellings than the hearing signers (who were less skilled at fingerspelling).

b) N
One mber of syllables of the English word
nam of the most productive processes in creating a sign from a fingerspelled place
for 2 was to use the first letter of the word, as a single manual letter sign. It accounted
6% of all responses in this piece of research.

This use of a single manual letter sign is seen in established place-name loan signs such as GLOUCESTER (-g-g-) and is especially productive in other semantic groups in BSL such as units of measurement and kinship terms (eg -m-m-, glossed as MOTHER and -f-f- glossed as FATHER).

It is commonly believed that the number of syllables of an English word influences the number of repetitions of the single manual letter. Thus, a bisyllabic English word will lead to the creation of a single manual letter loan sign which articulates the letter twice, and a trisyllabic word results in a triply articulated first letter, and so on.

Although there does seem to be some support for this folk belief, there are other factors involved. For example, in this research, two articulations was the preferred response for *any* single manual letter sign derived from an English word of more than one syllable. As may be seen in Table 3, below, the percentage of signs in which the number of articulations of the manual letter matched the number of syllables in the English source word was not always the biggest, but two articulations were most common for any word of more than one syllable.

	1 syllable	2 syllables	3 syllables	Over 3 syllables
1 articulation	57%	22%	8%	5%
2 articulations	29%	74%	75%	64%
3 articulations	8%	6%	11%	28%

Table 3: the relationship between the number of articulations of the manual letter corresponding to the first letter of the English word and the number of syllables of the English word.

It is clear that there is some relationship between the number of syllables of the English word and the number of articulations of the single manual letter sign. However, the link between syllables and number of articulations only seems particularly strong with one and two syllables. There are some instances of single manual letter signs with four articulations derived from four-syllable words, but these are rare, and the most common number was two.

The form of the manual letter itself is also important. Figure 1 shows that the BSL manual alphabet has two letters with their own internal movement: -h- and -j-. These two letters do not show such a close relationship between number of articulations of the first letter and the number of syllables in the English source word.

There were 32 responses in this data corpus that used the first letter -h- alone for a polysyllabic place-name beginning with "H", and 20 of these (63%) only used a single articulation. There were 18 responses using -j- alone for polysyllabic place-names beginning with "J", and 17 of these (94%) only used a single articulation.

Analysis of another corpus of BSL signing (not focussing on place-names) showed a similar pattern. There were 11 uses of -h- alone being used as signs derived from polysyllabic words beginning with "h". Eight of these signs used only a single articulation. With -j-, the proportion is even more remarkable, with all six instances of -j- used alone as signs for polysyllabic words beginning with "j" using a single articulation.

Clearly, the additional movement within the letter allows the signers another option, namely that of extending or holding the internal movement, rather than repeating articulation of the entire letter.

c) The letters in the word

Some letters in the orthography of a place-name are more likely to be retained than others. Here I will mention two occasions upon which the letters in the English word, combined with the form of the manual letters to influence the form of the BSL sign that resulted from the loan.

English orthography

The retention of the first two letters was almost unknown in this research except for in two particular situations. If the English word starts with a vowel (eg Aberdeen, Edinburgh or Oxford) the preferred strategy for many signers is to select the first two letters. This is particularly true for hearing signers. They gave 111 responses using the first two letters from words beginning with a vowel (26% of all the responses to this type of word), whereas the deaf signers gave only 37.

If the English word starts with a consonant cluster in which the second letter is "h" (eg "ch", "th" or "sh"), many signers retained both letters. Both deaf and hearing signers used this strategy, suggesting that the pronunciation of these clusters is not the most important factor.

Form of the manual letter

I have already mentioned that the use of the first letter in a place-name is a very common process, but some first letters permit this more than others, and this is related to the physical form of the manual letter. Initial vowels are rarely used for single manual letter signs. At least some of this must be a result of the handshapes used for the letters. Reference to Figure 1 will show that the -i- and -o- handshapes are "weak" letters, in that they are not easy to articulate strongly, and they are not always easily distinguished by the addressee. The consequence must be that they are not commonly used alone as first letter signs. The letters -i- and -o- are made with the contact of one fingertip of each hand. The successful contact of active and passive hands is less easy when there is such a small surface area available. During rapid fingerspelling, this is not a great problem because making and retaining contact with the passive hand is less important when there is a following letter. When these letters are the only hand-arrangement in a single sign, however, they need to be held, and the active hand must make and retain contact with the passive hand. This is difficult, and would explain why these letters are so rarely retained as single manual letter loan signs, which must be held.

Evidence that it is the manual letter hand-arrangements that are at least partly responsible for this under-representation of vowels in single manual letter signs, and not solely some feature of the English vowels, comes from the fact that several signers did focus on the first letter of the English word, but did not use the -i- and -o- that is usually used in British fingerspelling. Instead they used different, one-handed,

innovative handshapes to represent the letters "i" and "o" iconically, where contact between hands was not an issue.

Another influence of the form of the BSL manual letter lies in the retention of the last letter as part of a selection of letters for an abbreviation. In this study, the last letter of the word was more likely to be retained if the manual letter was symmetrical. This may be seen in Table 4. Reference to Figure 1 will show that the manual letters retained on over 15% of all occasions of uses of a last letter are all symmetrical. (The letter -m- might appear anomalous at first. However, in conversational BSL, the citation form of the manual letter -m- is frequently altered so that both hands are symmetrical flat palms.)

Under 5% retention	a, d, e, o, s, u
5-10% retention	g, h, n, p, r
11-15% retention	k, l, t, y
16-20% retention	b, m
Over 20% retention	f, w, x, z
Not applicable	c, i, j, q, v

Table 4: Percentage of each of the last letters retained when the loan uses first and last letters from the English word.

Historically, signs in BSL tend towards symmetry, and symmetry operates in some sign formation constraints (Battison 1978, and Kyle & Woll 1985). This, again, shows the form of BSL influencing the outcome of the contact between the two languages.

It is also noteworthy that all the manual letters that were retained on fewer than 5% of all possible occasions are made with the tip of the finger of the active hand contacting the tip of another finger on the passive hand. This again may be seen by referring to Figure 1. This is further support of the point made above, concerning hand-arrangements with a small surface area for contact. As all the vowels, and the manual letters -d- and -s- require contact between two hands at small points, this makes the letter harder to articulate and hold. As with the single manual letter signs using the first letter, this limits the use of these letters as the final part of a loan sign, which must be held for longer than during normal fingerspelling.

From this, we may conclude that two physical factors are working to ensure the retention of some manual letters but not others: the limited surface area of contact between two hands in a manual letter, and the symmetry of the manual letter.

d) Word morphology

Many place-names obviously break into two or more parts, even if the meaning of all the parts is not immediately clear. If the meaning of all the parts is clear, and easily translatable, signers may create loan translations of the whole sign eg MOUNT ROSE, STONE HEAVEN, and BALL MORE (from "Montrose", "Stonehaven" and "Ballimore"). If the meaning of the morpheme is not immediately apparent to the signer, the signer can combine the use of manual letters with sign morphemes eg -m-ROSE, -s-FIELD and STONE -h- ("Montrose", "Shebfield" and "Stonehaven"). This strategy was used overwhelmingly by the deaf signers in this data corpus. Hearing signers very rarely

used it. This may be accounted for by the fact that the deaf signers have a better knowledge (implicit or explicit) of sign-formation processes in BSL and are more confident in creating non-derived signs. Hearing signers may be criticised for making up new non-derived signs, because hearing people often create signs that either go against BSL sign formation processes or result in signs that are considered inappropriate for many other reasons. Consequently, hearing signers would be less likely to create new signs. On the other hand, hearing signers have English as their first language and so are more likely to focus on fingerspelling as a means of creating a sign for something that they have (often) only seen written down.

In conclusion, the evidence presented here provides an instance of one language borrowing from another as a result of extensive language contact. The borrowing is from an essentially spoken modality into a visual one, via the orthography of the spoken language. In this, perhaps unique situation, a combination of features of both languages, and the language users' skills leads to the eventual outcome of the loan.

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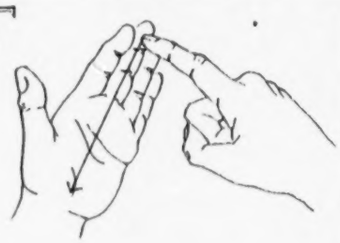

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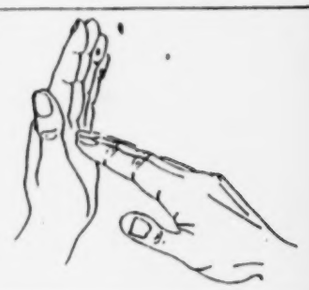

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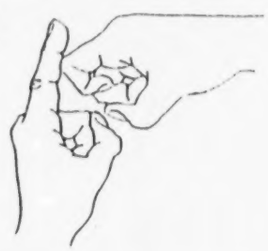

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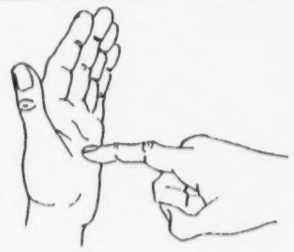

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